

QUA·RAE

HERE IS NEWS OF....THE RADIO ASSOCIATION OF ERIE, INC.

VOLUME IV , Number 8

September 1973

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Editor: WA3TRJ, Hoppy
Printer: WA3HDK, R. Bair

Typist: WA3UTN's XYL, Carol R.
Contributors:

L. Forbes
Brownie
Hank Schnieder
Charles A. Bliley
Mike D. Hall
George Dickey

W3STK
K3QAY
W3KPF
K3NAU
WA3HSR
K3VLP

ERIE'S FINEST AMATEUR RADIO NEWSBULLETIN BY FAR !

RADIO ASS'N OF ERIE, INC.
P.O. Box 844
ERIE, PA. 16512

NON-PROFIT ORG.
U.S. POSTAGE
- PAID -
ERIE, PA.
PERMIT NO. 266

THIRD CLASS

The Radio Ass'n. of Erie, Inc. Serving area "Hams" for over 27 years.

August 2, 1973

The meeting was called to order at 8:00PM by K3QAY.
Officers present: K3QAY, K3NAU, WA3HSR, and WA3EAY.
Directors present: K3VLP, WA3MAU, and WA3HSR.
The minutes of the July meeting were approved.
The treasurer's report indicated a balance of \$222.64.
A motion to pay new bills was heard and carried.

CORRESPONDENCE:

- 1) Bill from Betty & Merle Florist for \$15.90
- 2) Bill from Pennocks for COM Truck inspection \$8.50
- 3) Bill from Caravaglia Litho for supplies \$11.45
- 4) Financial statements from FNB.
- 5) Indiana ARC and Lake Rangers Bulletins
- 6) Federal EOC specs from CD.
- 7) New revised 610 forms from FCB

COMMITTEES:

QUA-RAE - WA3TRJ submitted a bill for \$20.00 for typing, and \$12.09 for Dymo tape refills used in addressograph plates. Hoppy also reported that the typewriter used by QUA-RAE was in need of repairs and suggested that the club consider buying another typewriter. It was decided after some discussion that the ad money be used to purchase the club used addressograph machine printer Model 85 from WA3HDK. This would allow the press to be club owned. The balance of \$70.00 would be paid to WA3HDK in February.

CD - W3KPM reported that a possible hospital drill would be held in September and advised all to be ready for it.

REPEATER - WA3TRJ turned over receipts from the RAE Auction showing that \$43.18 was due the committee on goods sold for the committee. It was reported that the license application was back in Washington and being considered. The tower will be given a paint job soon and tower erection is scheduled for September.

BOARD - K3VLP reported on a tentative budget for the coming year that he drew up. It was also reported that lightning and vandalism insurance for RAE equipment at the EOC and repeater sites would cost approximately \$50.00 - \$75.00 per year. George also mentioned that a dues increase for 1974 would be discussed at length at the September Board meeting.

ACTIVITIES - K3NAU reported on picnic plans and requested an additional \$50.00 to help cover expenses. A motion was heard and carried for the funds. Chuck also reported that ox roast would be a problem because of the shortage of beef. It was also reported that an internationally known speaker would present a world wide travelogue show on Tuesday, September 18 at 7:30 PM at the Eagles Club. The name of the speaker is being withheld until a later date at his request.

Minutes continued from pg. 2

NETS - It was noted that the August transmitter hunt would be held on the 12th to avoid conflict with the Warren Hamfest.

When called for there was no old business.

NEW BUSINESS

WA3HSR reported that Ron Jakubowski's new call was W7JRL and new address of 158 Jefford Street; Fort Huachuca, Arizona 85613. Ron Kathy and harmonic Becky will be home September 5 - 17.

A motion for adjournment was heard at 9:34 PM and carried.

Respectfully submitted,

Michael D. Hall WA3HSR
Secretary, RAE

August 9, 1973

The meeting was called to order at 8:00 PM with K3QAY presiding.
There was no secretary's report for July.
The treasurer's report indicated a balance of \$179.48 with \$43.43 yet to be deposited from the Auction.

Under old business the idea of a sustained carrier access of the repeater was discussed. This, it was felt, would eliminate sporadic skip from tripping the repeater at length with only short bursts.

It was agreed that the .19 receiver be pulled off the line to try and isolate or eliminate recent problems with the receiver from skip signals or those testing on .19 and tripping the machine.

K3QAY reported on recent communications with PENELEC and a tentative work party date was set for Saturday, September 8 at the CD farm to erect the base of the tower at least.

It was also reported that the license application had been received by the FCC in Washington and had been placed back into its original time slot in regard to consideration.

K3VLP and WA3HSR volunteered to paint the tower at K3QAY QTH within two weeks. A base primer coat will be painted with a finishing coat of red and white.

The meeting was adjourned at 9:10 PM.

Respectfully submitted,

Michael D. Hall WA3HSR
in lieu of K3QHO

HELP - HELP - HELP

In three short months, on Thursday Dec. 6 we will meet to elect two board members, 1974, 75, 76. At least one of these will be a new member as Bart W3SN is not eligible for office. The board then has to meet and name the officer for 1974, and the Audit & Budget committees.

Here is where the whole club, not just the board needs HELP. This past year one person has held eleven(11) jobs; plus taking part in every work party. Doing this takes its toll. Think back a little, how many officers or board members in the past ten years are still active with the club? How many do you even hear on the air?

We realize that everyone doesn't have a lot of time to devote, but if you would help out with one committee or take one office it would sure help. Staying away from the meetings to prevent being asked to help only frustrates us more, because we have no idea what you want the club to do.

The "Erie Area" encompasses more than 500 hams. The RAE has over 125 members. This past year about fourteen people have done ninety percent of the work. Not because they wanted to, but because no one else would do any. As an example at the last repeater meeting it was decided to paint the tower. WA3HSR(Mike Hall) and myself K3VLP ended up volunteering to do this job, even though I don't use 2 meters and Mike uses it very seldom, because no one else would offer.

In talking to the officers of the local clubs I find that this is the rule, not the exception. Of the four local clubs (Erie Co. other than schools) I find that 25 people do almost all the work.

Another place where we need help is at the program meetings. The program chairman has been seen trying to crawl into the cracks of the floor, but it seems that he has been fed to well. When he goes to the trouble of getting an idea for a program, finding a suitable place, then getting someone to put the program on, only to have you and your friends stay away because it's not "your cup of tea". It sure is embarrassing, let me sight you three previous examples: The meeting with Jesse W3KT, who came from the SE part of the state. Willie Minola of mini-products; who of course is local, and when PARC had the FCC engineer from Buffalo in town. These men have to make a report, usually to a superior, and at least to the IRS justifying any expenses incurred to hold the meeting. When they meet on business or at a social gathering they compare notes. The next time they are asked into the area the question will be "is it worth my time and effort?".

There it is, we definately need your help please try and give us a hand. At least attend the program meeting, let us know what type of meeting you want, what speaker that you have heard or read about anything to make the chairman's job easier, but most of all attend the program meeting and offer your help in some of the many jobs needed to make Amateur Radio more enjoyable for all of us.

Also if you have something that would be of interest in the Ham radio field please put it in writing along with any sketches and send them to the editor.

PLEASE HELP US IMPROVE OUR CLUB.

"73" George Dickey
K3VLP

MAZ SEZ

My vacation is over and our trip to Mexico was enjoyable and relaxing even though the temperature and humidity were both about 95. I did not do any "hamming" during July so I am just getting up to date on the local bands. It seems that we must all do our part for the RAE for the rest of the year, the club picnic is on the 18th of August and I hope to see many of you at Waldameer.

One of the most important functions this fall is the annual RAE Hamfest to be held in October. The club has invested heavily in the raffle prizes and each of us must do our part to sell tickets on the TR-22 and cash award. If you haven't received tickets contact George Dickey (K3VLP). If each of the members sells 5 tickets we will about break-even; so you see how important it is to support this function. The hamfest will only be as successful as you members make it. Set the date aside and plan to attend and eyeball with those hams you seldom see or haven't met. This is always an enjoyable affair with various door prizes and a good speaker. See you there.

There are tentative plans to have a work party at the CD farm at 9 AM on Saturday Sept. 8th, to start erection of the 100 foot tower. If all goes well we will install the tower base and supports for the guy wires. If you can lend a hand call Bob Smith (K3WTZ) before coming out to see if the date has been confirmed or if it has been changed. We have to get going on this and get it completed before cold weather catches us.

The RAE is pleased to announce a special bonus for all of the Hams and their families in the Tri-State Area. Thru the efforts of K3NAU, K3VLP and K3HSR, we have obtained one of the best known DX'ers in the world to present in words and pic-

tures his DX Travel Log of the many expeditions he has made on Tuesday Sept. 18th at 7:30 PM at the Eagles Club. The only clue we can give as to his identity at this time is that his name has appeared on a lot of electronic equipment over the years. This may be a once in a life time opportunity to meet and hear this man, so please plan to attend. He is traveling many miles to be with us and we should honor him with a large turn-out.

"73" - K3QAY
Brownie

Erie County Technical School Adult Program 1973-1974 Fall Term

Electricity- Electronic- Communications	
Digital Computer Fund.	Tues & Thurs
Electronic Beg. 1	Mon & Wed
Electronic Solid State	Mon & Wed
Electronic Communication 1 (FCC Lic. 2nd class)	Mon & Wed
Industrial Electricity Beginning 1	Tues & Wed
Industrial Electricity Advance 111	Mon & Wed
Radio TV Broadcasting Intro 6:30 to 8:30	Tues & Thurs
Techniques of TV Production 8:30 to 10:30	Tues & Thurs
Telephone	Mon & Wed
There is a \$5.00 fee for all students which will be refunded if they attend 80% of the course hours.	

Fall term begins the week of Sept. 17th.
Most class hours are 7:00 to 10:00 PM.

For more information contact George E.
Garfield. Phone 864-0641.

Submitted by L. Forbes W3STK

CQ, QRZ, OR MONITORING/

Habits are things that can save us time and trouble, or can be a millstone around our necks. So it is with some of the procedures we use in amateur. The novice ham is encouraged to develop new habits on the recommendation of the oldtimer who is supposed to know best. But sometimes the source of the rationale for a particular procedure becomes lost in time, or the old procedure is carried over to other areas new to amateur radio.

Years ago there weren't as many hams and a lot more space available to all, or so it seemed. By today's standards that would be true, but spark transmitters do use up many times more space than a modern filter type SSB signal, but then again the reliability of the old equipment was quite a bit poorer than it is today by a long shot. In the old days it was sometimes necessary to call CQ many long minutes before you got an answer. There were listeners then too, look in some old issues of QST from the twenties and you will find listing of "call signs heard" from a number of listening posts across the country. Of course, at that time we were really just beginning to "experiment with propagation.

Back then CQ and QRZ meant something somewhat different from the way we use them on the bands today, especially on two meters where they almost the same thing. Years ago when some hardy souls first got on VHF FM with their crystal controlled rigs, they were so few in number that they tried to crystal up on the same frequency, or nearly so. This meant your buddy was either listening on the frequency or he wasn't. Usually a quick call to him was enough to raise him if he was listening. But then along came the

increase on popularity, not the boom of the last few years, just a few more fellows on the band. Most people found a long CQ on the frequency was a waste of time, but how do you get out of the habit of the long CQ on two meter AM for five minutes at a crack with little or no real hope of anyone coming back. Sometimes I think I did it so I could at least say I was "using" the equipment, and "using" the band, so the CBers or the broadcast services wouldn't petition the FCC for it. Sometimes I think I would rather have all that money spent in wasted electricity in a bank somewhere collecting interest.

When fellows like me came along on the FM part of the band, the oldtimers tried to think of some other way of calling a CQ and guarantee it would be short. Enter "QRZ". Obviously you couldn't call QRZ for minutes at a time. Bingo! A new "CQ" for FM operators!

Changes often come about for good reasons but they don't always work out in the long run. Today on two meter FM confusion reigns. The oldtimers are still trying to innovate the "novice" FMer in the proper procedure for FM. I think it is a good time to redefine what CQ, QRZ, and Monitoring really mean. After all the listening and traveling with two meter FM, I see three distinctly different messages for which these signs are being used for, and a definite need for some minor modification of all three.

"CQ" should be used to indicate you are interested in talking to anyone at all for the sake of company on a trip, or to help pass the time, or to ragchew. If you care to, you can modify the CQ to include any specific need. "CQ 94 through the Erie Repeater, looking for travel information, this is K3". Decoding this message

CQ continued from page 6

it would mean: "I am interested in talking to anyone who may be listening to the 146.94 MHz repeater in the Erie Area who could give me some help in finding my way through "your" town."

At this point I would like to point out an intentional change in this, or any general CQ. An example of the general CQ; : "CQ 94, this is K3..." or "CQ 94 through W3... repeater, this is K3... listening." (Keep it short; either someone copies you or he doesn't.) The inclusion of the frequency to which you are listening, and if you know you are activating a repeater whose output is that frequency, it all important. In many areas where there is two meter FM activity, there are often fellows like myself who are interested in monitoring several different frequencies at the same time for a sundry of reasons. We may have different receivers, or a scanner with five or six different frequencies in it for repeater and simplex channels. Can you imagine how confusing and frustrating it would be to hear someone make many people. It wouldn't have any idea as to what frequency he is receiving on, if he needs something specific, did he hear someone else I may not have copied? and wants to talk to him, or is he just calling "CQ"!

QRZ should be reserved for only several specific situations. Such a case is when you are calling a CQ, but you didn't get the call sign clearly. "QRZ the mobile calling K3..., this is K3... standing by." Or "QRZ the station offering traffic directions, this is K3..." I realize this isn't the literal definition of what QRZ means as defined in the Handbook, but then again it is somewhat clear in its meaning. Besides the "Q"

signals were derived for use on CW and not for phone in the first place.

The last, but certainly not least is "Monitoring". This is a term which has come about as a result of two things. Met and fixed frequency operations, and old VHFers on two meters and six who monitored until the activity died on both those bands. In the case of the old use of "monitoring", this was the symptom of the deadly disease of laziness--let the other guy do the calling, I will just listen and see if he gets an answer. With everybody listening an almost no one calling, there's no ham radio; you might just as well send your license back to the FCC and save yourself nine dollars every five years and become a SWler. At least one good thing did come out of the whole thing - we all pretty much understand the meaning of "monitoring" and agree on it.

"This is K3..., monitoring 94." A simple statement that means only one thing (or so it should), you are listening to the frequencies mentioned, and will answer any calls if they are directed to you or answer calls for help or assistance. Please don't misconstrue this for CQ. This station is probably doing some work in the shack, but wouldn't mind being interrupted for a call. He is not actively seeking a contact, just merely announcing he is around on the frequency.

From time to time even I forget to use what I profess, and get some snide remarks about it from the local gang who I have been "working on" for some time to change their "deviant ways". But I too am trying to change a habit, and habits are not easily broken.

Continued on page 8

Cc continued from page 7

Please remember two things. Say what you want or mean; make it as clear as possible and you will save yourself and others a lot of trouble and guessing and get the results you want the first time around. Next, the frequency to which you are listening should be included where appropriate to help eliminate a source of frustration for those poor souls like myself who are trying to listen to many frequencies at the same time. This point may also be helpful when traveling in strange parts of the country where standard repeater frequency pairing is not used. Thus, if you call on 146.34 MHz for assistance, there may be a repeater hearing you with an output on some other frequency than the standard 146.94 MHz. In this case, if you state the frequency to which you are listening, some one may answer you on that frequency that you said you were listening to. I personally know of several repeaters who monitor several popular frequencies at the same time, yet repeat it out on only one frequency, under normal operation. "A shot in the dark" in an emergency on the road would be just that if you fail to mention the frequency to which your receiver is set on.

The popularity of crystalized/channelized VHF FM operation is increasing daily in leaps and bounds. According to the ARRL, one in ten amateurs in the U.S.A. is on VHF FM. If we don't make an attempt now to set consistent and reasonable operating practices and procedures, we can expect nothing but confusion and frustration in the future. Habits are nothing more than habits. They are subject to change. Let's get out of

the old ones and into some newer and better ones.

"73" for now, and I hope to see you on two meters soon. For now, this is K3NAU signing clear, and QRT for the day.

Charles A. Bliley

UNKNOWN HAM, have not received your letter as of yet.

EDITOR, WA3TRJ

Paint was gotten from Filutz Bros. store at 32nd & Pittsburgh Ave. at a very reasonable price.

To these people we extend our deepest sympathy and condolences.

W3WDK - Robert Weaver lost his mother..

W3WAX & WA3HRH Milt and Doug Sipple lost their Father.

WA3KAZ - Paul Flick lost his Father.

W3PRC - Tom Hawes lost his Stepmother.

FROM THE BOARD

Hopefully on Thursday Sept. 6th the RAE will reach another milestone. For the first time the board will be responsible for presenting a budget for 1974. As this is a first it took a little longer to make up; and there is more possibility for error than if we had one to look back on for reference. PLEASE, PLEASE try to show up at this meeting so that any decision arrived at will be by the majority. As you will see there is a difference between projected expenditures and income. As this budget is meant as a guide this will be smoothed out hopefully as the year progresses.

	1973	1974
Insurance liability	27	00
liability, fire, vandalism	00	100
Repeater Committee	25	25
Bank Charge	10	12
Bank safety deposit box	7	10
SEC. supplies	35	40
Flowers	30	40
Truck inspection, gas, etc.	75	90
Bulk mail permit	30	35
Post office box	12	15
QUA-RAE	300	360
Programs, Picnics, Meetings	150	300
Field Day	22	35
Equipment Repair	60	120
Equipment Upgrade	<u>150</u>	<u>200</u>
Total	933	1382
Interest from Bonds	371	572
Profit from Auction	100	100
Qua-Rae adds	80	
Due 126 at 1.50	<u>189</u>	
	740	

* as the year is not complete some items are pro-rated.

Submitted by

K3VLP George Dickey

THE ARRL BULLETINS

Nr. 434

July 5

Amateurs newly interested in DX are reminded of another ARRL membership supported service, the incoming QSL Bureau. Any Canadian or U.S. amateur expecting DX QSL is urged to have envelopes on file with the appropriate call area QSL Bureau. Page 95 of July QST details information on envelope requirements as well as a complete list of bureau addresses.

Nr. 435

July 12

Radioteletype station in Havana and Moscow with spurious emission every four or five kilohertz continue to cause harmful interference on 20 meters. Every possible diplomatic pressure is being used to solve the problem. ARRL Hq. would like all those affected to continue submitting complaints, which are being processed through FCC.

"73" Hank Schmieder W3KPJ

High Cost

Do you know that it cost us 1.7 cents to mail each QUA-RAE. If your address is not correct the post office will not forward it; which means we have wasted our money. Now for the expense we feel you might not know about. The post office returns these papers to us at an "additional" cost of 8 cents each. Could you be one of our added expenses?

Please make sure your address is correct. If not please let us know. If you have not been receiving a paper this may be why.

EC REPORT - JULY / AUG. 73

As is typical of summer month, the AREC activity has slipped to a low ebb locally. Civil Defense Radio Officers Tom Schwab, W3KPM promises that a sudden emergency hospital drill will be conducted in September. Those who are assigned to hospitals should be prepared to respond quickly as this test should simulate emergency conditions better than the one of June. A permanent antenna installation & better co-ordination of equipment assignment are needed for this drill. Welcome Roy Ranowiecki, WA3-UTN as a new full AREC member for Erie County.

September should see the erection of the RAE repeater tower on the CD farm. The added area of receive coverage should greatly enhance the machine's effectiveness in times of emergency & drill. I hope that this will result in more hams using the repeater and realizing its potential.

As far as the EOC stands, much needs to be done this fall to ready the facility for winter use and the coming contests. A TA-33 needs to be installed, the 40m "VEE" is down, the Invader 2000 is still out of commission, and other problems are bound to pop up. Several work parties will be needed to complete these projects before winter sets in, so don't be surprised if your "asked" to volunteer your services shortly.

Operational planning for the Halloween Rat Patrol has already begun. Last year's system seemed to work out rather well and a similar system of assignments will be made this year. I received very few comments, or suggestions pertaining to last year's drill, so I guess it was

not all that bad. If you have mobile capability on 10 or 2 meters, and I know about it.... expect a land line from me next month. Our Rat Patrol has become an expected thing and it is an AREC activity, though one of the few we have.

That's about it for AREC, don't forget the RAE activity meeting Tuesday, Sept. 18th at 7:30 PM at the Eagles Club. An internationally known ham will present a world-wide travelogue with color slides and discussion. It should be an enjoyable show for the XYL and the whole family. The speaker's name is being withheld at his request but will be released at a later date.

"73" Mike Hall WA3HSN

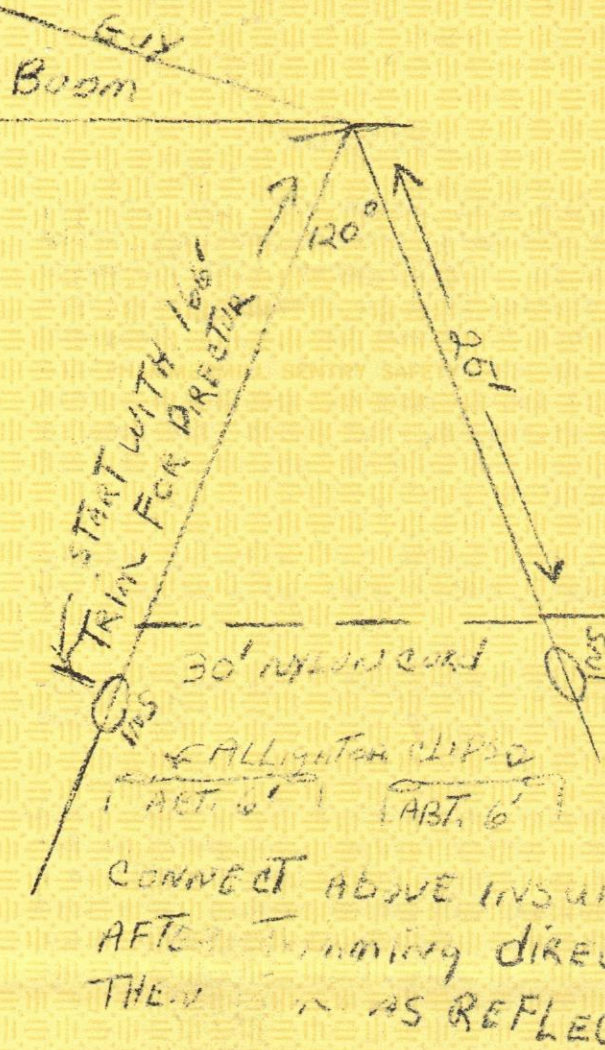
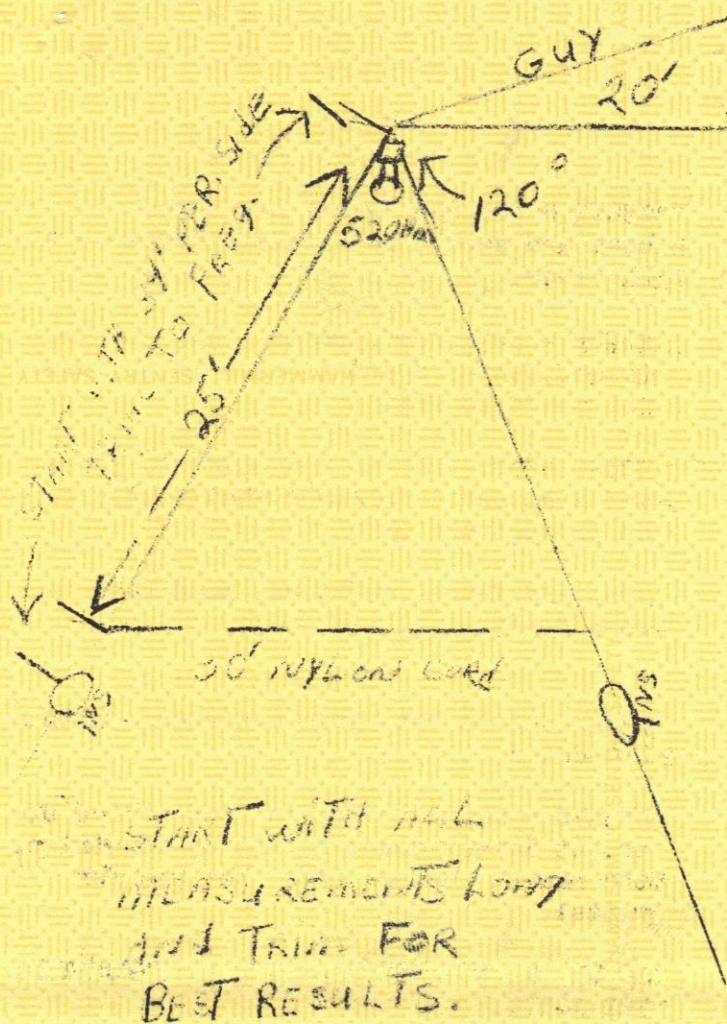
FIELD DAY ANTENNA

The antenna used on 40m this past Field Day was strange to look at, but, it did work. Test reports from a station in Toledo, Ohio and another in Battlecreek, Mich. prior to F.D. showed 2"s" unit difference between the director and reflector. Without turning the antenna on transmit. On receive it was as good or better.

At the same time I compared it with my windum up about 25' and the same stations reported that even the back of the beam was better, than the windum. "either the beam is good or the windum is bad. I think Field Day speaks for it.

"73" George Dickey
K3VIP

* antenna diagram is on page 11.



K3

SEPTEMBER MATH LESSON

3 17 25 19 18

9

16

The solution to this problem is on pg. 13

MEADVILLE REPORT

Code Practice

ARRL may soon make available recorded tapes of code transmissions. These tapes will be made available to affiliated clubs on the same basis as films and tape lectures are now made available. A club can order the tape and make a copy.

LOST: "Oscilloscope made from a T.V. Set" is missing from the CARS reference section at the Meadville Public Library. If you have info on the material please contact Robert E. Myers, K3HWL or Rog. WA3TCO

REPRINT FROM THE August 73 Crawford Key

The Mace advertisement was done by Chuck Manross, WA3KAT. Thank's Chuck.

DID YOU DO YOUR SEPTEMBER MATH PROBLEM? If you didn't get the ans. 18, try again

REGISTER NOW FOR FCC LICENSE CLASS - E.C. VO TECH

SUNDAY NETS: MERET-146.34/.94-10 PM

LEEN-29.000-8 PM; TRI-STATE-50.52-9 PM

2	3 LABOR DAY ⚡	4	5	6 RAE BUSINESS 8 PM	7	8 VHF QSO PARTY
9 VHF QSO PARTY FMT	10	11	12 WIAW QUALIFYING RUN	13 REPEATER MEETING ---...---	14	15 HAMBURG HAMFEST
16 XMTR HUNT 6:00 PM 🚗🌲	17 ---...	18 WORLD WIDE TRAVELOGUE EAGLES 7:30 PM	19 ---...	20	21	22 VE/W CONTEST
23/30 VE/W CONTEST	24	25 ---- WIAW QUALIFYING RUN-AM	26	27 QUA-RAE MEETING	28	29 1 WEEK TILL RAE HAMQNET

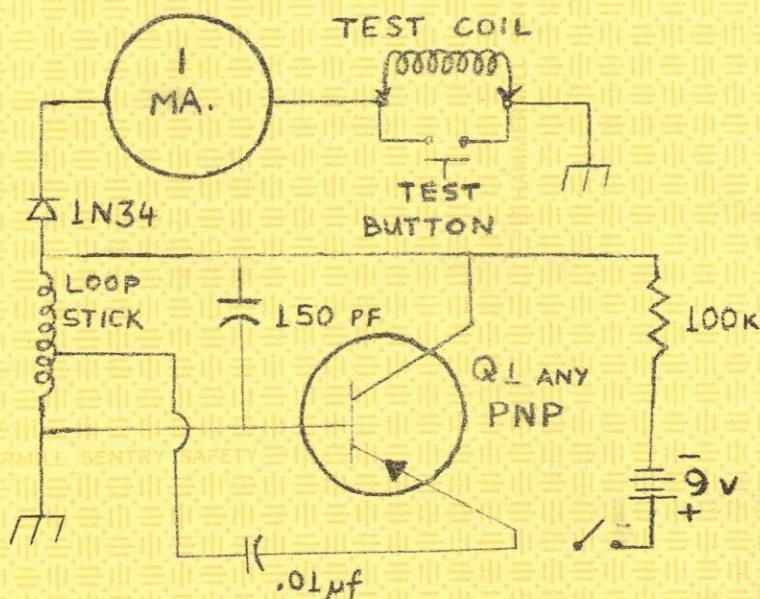
THE HENRYOMETER

You say Your car muffler sounds like "D-Day and your're so thirsty you're going to take a part-time at a brewery for the summer and you can pay your rent if you do your mother-in-law in to collect the double indemnity? Well, shout for joy,"cause at least you can check inductances accurately from .25 to 10 millihenries !

This is just the thing for checking out that suitcase full of old chokes you bought at the flea market.

The henryometer can be built on any old circuit board, in a mini-box, or any old piece of cardboard if you're hardpressed like me.

To test a coil, just connect it across terminals, push the test button, adjust the potentiometer for 1 MA., let up on the test button, and read the value indicated.



"73" Ray WA3SLX

PARC REPORT

WA3PWL/O - Bill Straw of Des Moines, Iowa writes he's been contesting, broke 171,000 in July CD party with 150 watts and a dipole. Bill is getting pretty high in all but 10 meters for 5-band WAS, and wondering how he can make it on 10 meters. He still isn't sure of getting a permit for a mini-quad. Out there you need a permit to put up a TV antenna 4 ft. off the roof.

W3BRB - John Gebler is enjoying riding his Yamaha. Wonder what he'll do come icy WX?

WA3GJH - Joe Szymanowicz has been spending his summer getting some flying time in, lucky boy!

The Presque Isle Amateur Radio Club will soon be having a free beer party at Kohlers. A maximum of 35 persons will be admitted. Any RAE member wishing to attend should contact WA3HSR at 833-9649; who will relay to PARC. First come first served on this one.

WA2IRX - Bob Auerbach who has just moved here from Iowa; where he just got out of school lugging his PHD with him. Bob hasn't been on the air for ten years and just picked up an HW-101 but needs to put up a antenna.

K3GYD - Don now has a new three element beam and should be a real threat on the DX bands.

K3TUP - John now sports a W/L crank-up tower. Now he doesn't care if the winds get above 20 MPH.

W3BBO - Bob has a new Classic 33 beam and a speech compressor that really punches through the QRM.

Men are funny critters, some kiss and some don't kiss, and tell!

W3BRB - John has gone mono-band with a 2Q1 BA.

WN3RVZ - Marty is Erie's top novice DX'er. At latest count he has 65 countries, the newest being 6W8. Not bad for 75 watts!

NO WE DID NOT MISPRINT THE MATH EQUATION TRY AGAIN.

WA3JFV - Jay is redoing his ANT and plans some early morning DXing.

REPRINTED FROM CQ PARC CQ PARC

ANY FUTURE ARTICLES MAY BE SENT TO: MR. BUD HOPKINS, 3834 PARADE BLVD., ERIE, PA 16504

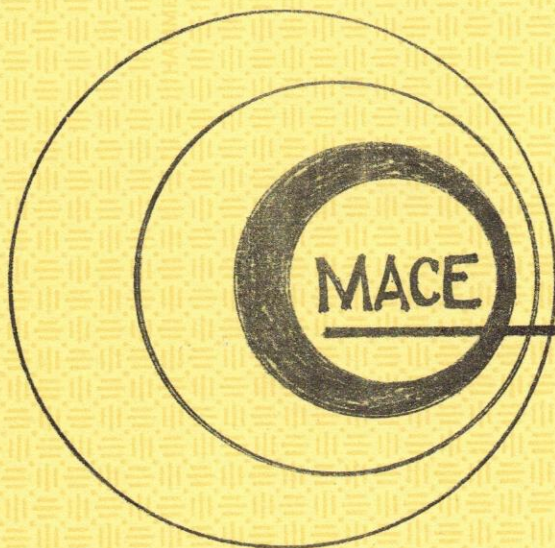
VISIT THE STORE THAT ROCKS WITH GOOD MUSIC GEAR

- PIONEER
- PANASONIC
- LAFAYETTE
- GARRARD
- SANSUI
- DUAL

- TEAC
- SONY
- BSR
- JBL
- AR
- FISHER

* * * * *

OPEN: 10 to 9 - Monday thru Friday
10 to 5:30 on Saturday



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- AND LIBERTY PLAZA - ERIE, PA. •
- MEADVILLE MALL •